

EXAMINER'S AMENDMENT CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A character recognition method, comprising:

using a processor to perform the following method;

queuing continuous path data made by traversing edges and diagonals and into corners within a confining geometric shape constraining an input device to less than the input device's total area;

searching the queued continuous path data to generate a sequence of corner hits, where a corner hit corresponds to a corner defined by said geometric shape; ~~and~~

identifying a character based on said sequence of corner hits independently of the remainder of the continuous path data;

wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode; and

identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner and lower case when said stroke does not end in said common predetermined corner.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The method of claim ~~12~~ wherein said input device is a touch sensitive surface, said method additionally comprising detecting loss of contact with the touch sensitive surface, said loss of contact indicating the end of a stroke.

5. (Currently Amended) The method of claim ~~12~~ additionally comprising detecting the actuation of a switch, said actuation indicating the end of a stroke.

6. (Currently Amended) The method of claim ~~12~~ wherein said input device is a joystick, said method additionally comprising detecting lack of movement of the joystick for a predetermined period of time, said lack of movement indicating the end of a stroke.

7. (Original) The method of claim 6 wherein said detecting lack of movement includes detecting the joystick at two identical positions within said predetermined period of time.

8. (Previously Presented) The method of claim 7 wherein said positions correspond to a center point.

9. (Original) The method of claim 1 wherein said identifying a character is comprised of comparing the determined sequence of corner hits to data representative of a plurality of stored sequences of corner hits, selecting one of the stored sequences of corner hits based on said comparing, and outputting a character linked to said selected one of said stored sequences of corner hits.

10. (Original) The method of claim 9 wherein said comparing includes comparing the determined sequence of corner hits to a library of stored sequences of corner hits which is representational of a printed alphabet.

11. (Previously Presented) The method of claim 9 additionally comprising changing the stored sequences of corner hits that are linked to a character.

12. (Original) The method of claim 11 wherein said changing includes providing one example of a sequence of corner hits and the character to which that sequence is to be linked.

13. (Previously Presented) The method of claim 1 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said continuous path data is being queued.

14. (Previously Presented) The method of claim 13 wherein said varying the size includes decreasing the size of only certain corner areas.

15. (Previously Presented) The method of claim 13 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

16. (Previously Presented) The method of claim 1 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said continuous path data is being queued.

17. (Currently Amended) A letter character recognition method, comprising:

using a processor to perform the following method;

queuing continuous path data made by traversing edges and diagonals and into corners within a confining geometric shape constraining an input device to less than the input device's total area;

searching the queued continuous path data to generate a sequence of corner hits within a single unistroke, where a corner hit corresponds to a corner defined by said geometric shape;

determining a sequence of corner hits within a single unistroke;

identifying a letter character based on said sequence of corner hits independently of the path therebetween; and

identifying said letter character as being upper case when said single unistroke defining the character ends in a common predetermined corner and lower case when said unistroke does not end in the common predetermined corner;

wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode.

18. (Cancelled)

19. (Cancelled)

20. (Previously Presented) The method of claim 17 additionally comprising detecting loss of contact with a touch sensitive surface, said loss of contact indicating the end of the unistroke.

21. (Previously Presented) The method of claim 17 additionally comprising detecting the actuation of a switch, said actuation indicating the end of the unistroke.

22. (Previously Presented) The method of claim 17 additionally comprising detecting lack of movement of a joystick for a predetermined period of time, said lack of movement indicating the end of the unistroke.

23. (Original) The method of claim 22 wherein said detecting lack of movement includes detecting the joystick at two identical positions within said predetermined period of time.

24. (Previously Presented) The method of claim 23 wherein said positions correspond to a center point.

25. (Previously Presented) The method of claim 17 wherein said identifying a letter character is comprised of comparing the determined sequence of corner hits to data representative of a plurality of stored sequences of corner hits, selecting one of the stored sequences of corner hits based on said comparing, and outputting the letter character linked to said selected one of said stored sequences of corner hits.

26. (Original) The method of claim 25 wherein said comparing includes comparing the determined sequence of corner hits to a library of stored sequences of corner hits which is representational of a printed alphabet.

27. (Previously Presented) The method of claim 25 additionally comprising changing the stored sequences of corner hits that are linked to a letter character.

28. (Previously Presented) The method of claim 27 wherein said changing includes providing

one example of a sequence of corner hits and the letter character to which that sequence is to be linked.

29. (Previously Presented) The method of claim 17 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said single unistroke is created.

30. (Previously Presented) The method of claim 29 wherein said varying the size includes decreasing the size of only certain corner areas.

31. (Previously Presented) The method of claim 29 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

32. (Previously Presented) The method of claim 17 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said single unistroke is created.

33. (Currently Amended) A method of generating a stroke, comprising:

using a processor to perform the following method;

queuing continuous path data made by traversing edges and diagonals and into corners within a confining geometric shape constraining an input device to less than the input device's total area;

searching the queued continuous path data to generate a sequence of corner hits independently of the remainder of the continuous path data, with each corner hit in said sequence of corner hits corresponding to a corner defined by said geometric shape; ~~and~~

receiving information indicative of the end of each stroke;

wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode; and

identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner and lower case when said stroke does not end

in said common predetermined corner.

34. (Previously Presented) The method of claim 33 wherein said input device is a touch sensitive surface, and wherein said information includes information generated by lifting an object out of contact with the touch sensitive surface.

35. (Previously Presented) The method of claim 33 wherein said information includes information generated by activating a switch.

36. (Previously Presented) The method of claim 33 wherein said input device is a joystick, and wherein said information includes information generated by returning the joystick to a predetermined position for a predetermined period of time.

37. (Cancelled)

38. (Currently Amended) A computer readable memory carrying software which, when executed, performs a method comprising:

 queuing continuous path data made by traversing edges and diagonals and into corners within a confining geometric shape constraining an input device to less than the input device's total area;

 searching the queued continuous path data to generate a sequence of corner hits, where a corner hit corresponds to a corner defined by said geometric shape; ~~and~~

 identifying a character based on said sequence of corner hits independently of the remainder of the continuous path data;

wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode; and

identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner and lower case when said stroke does not end in said common predetermined corner.

39. (Cancelled)

40. (Cancelled)

41. (Previously Presented) The memory of claim ~~3839~~ wherein said input device is a touch sensitive surface, said method additionally comprising detecting loss of contact with the touch sensitive surface, said loss of contact indicating the end of a stroke.

42. (Original) The memory of claim ~~3839~~ additionally comprising detecting the actuation of a switch, said actuation indicating the end of a stroke.

43. (Previously Presented) The memory of claim ~~3839~~ wherein said input device is a joystick, said method additionally comprising detecting lack of movement of the joystick for a predetermined period of time, said lack of movement indicating the end of a stroke.

44. (Original) The memory of claim 43 wherein said detecting lack of movement includes detecting the joystick at two identical positions within said predetermined period of time.

45. (Previously Presented) The memory of claim 44 wherein said positions correspond to a center point.

46. (Original) The memory of claim 38 wherein said identifying a character is comprised of comparing the determined sequence of corner hits to data representative of a plurality of stored sequences of corner hits, selecting one of the stored sequences of corner hits based on said comparing, and outputting a character linked to said selected one of said stored sequences of corner hits.

47. (Original) The memory of claim 46 wherein said comparing includes comparing the determined sequence of corner hits to a library of stored sequences of corner hits which is representational of a printed alphabet.

48. (Previously Presented) The memory of claim 46 additionally comprising changing the stored sequences of corner hits that are linked to a character.

49. (Original) The memory of claim 48 wherein said changing includes providing one example of a sequence of corner hits and the character to which that sequence is to be linked.

50. (Previously Presented) The memory of claim 38 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said continuous path data is being queued.

51. (Previously Presented) The memory of claim 50 wherein said varying the size includes decreasing the size of only certain corner areas.

52. (Previously Presented) The memory of claim 50 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

53. (Previously Presented) The memory of claim 38 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said continuous path data is being queued.

54. (Cancelled)

55. (Cancelled)

56. (Currently Amended) A computer readable memory carrying software which, when executed, performs a method, comprising:

queuing continuous path data made by traversing edges and diagonals and into corners within a confining geometric shape constraining an input device to less than the input device's total area;

searching the queued continuous path data to generate a sequence of corner hits within a single unistroke, where a corner hit corresponds to a corner defined by said geometric shape;

~~determining a sequence of corner hits within a single unistroke;~~

identifying a letter character based on said sequence of corner hits independently of the path therebetween; and

identifying said letter character as being upper case when said single unistroke defining the character ends in a common predetermined corner and lower case when said unistroke does not end in the common predetermined corner;

wherein each of said sequences of corner hits defines a single stroke, and wherein each single stroke is representative of one of a letter, number, punctuation or mode.

57. (Previously Presented) The memory of claim 56 additionally comprising detecting loss of contact with a touch sensitive surface, said loss of contact indicating the end of the unistroke.

58. (Previously Presented) The memory of claim 56 additionally comprising detecting the actuation of a switch, said actuation indicating the end of the unistroke.

59. (Previously Presented) The memory of claim 56 additionally comprising detecting lack of movement of a joystick for a predetermined period of time, said lack of movement indicating the end of the unistroke.

60. (Previously Presented) The memory of claim 59 wherein said detecting lack of movement includes detecting the joystick at two identical positions within said predetermined period of time.

61. (Previously Presented) The memory of claim 60 wherein said positions correspond to a center point.

62. (Previously Presented) The memory of claim 56 wherein said identifying a letter character is comprised of comparing the determined sequence of corner hits to data representative of a

plurality of stored sequences of corner hits, selecting one of the stored sequences of corner hits based on said comparing, and outputting the letter character linked to said selected one of said stored sequences of corner hits.

63. (Previously Presented) The memory of claim 62 wherein said comparing includes comparing the determined sequence of corner hits to a library of stored sequences of corner hits which is representational of a printed alphabet.

64. (Previously Presented) The memory of claim 62 additionally comprising changing the stored sequences of corner hits that are linked to a letter character.

65. (Previously Presented) The memory of claim 64 wherein said changing includes providing one example of a sequence of corner hits and the letter character to which that sequence is to be linked.

66. (Previously Presented) The memory of claim 56 wherein said corner hits include corner area hits, said method additionally comprising varying the size of the corner areas while said single unistroke is created.

67. (Previously Presented) The memory of claim 66 wherein said varying the size includes decreasing the size of only certain corner areas.

68. (Previously Presented) The memory of claim 66 wherein said varying the size includes decreasing the size of certain corner areas more than the size of other corner areas.

69. (Previously Presented) The memory of claim 56 wherein said corner hits include corner area hits, said method additionally comprising varying the shape of the corner areas while said single unistroke is created.

70. (Cancelled)

71. ~~(Cancelled)~~